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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,752	12/11/2003	Eric Lawrence Barsness	ROC920030327US1	8404

46296	7590	11/21/2006

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EXAMINER
LE, MICHAEL

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>*11 December 2003*</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>*1-47*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>*1-47*</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>*11 December 2003*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Summary and Status of Claims

1.   This Office Action is in response to Application No. 10/733,752 filed December 11,

2003.

2.   Claims 1-47 are pending.

3.   Claims 1-47 are rejected under 35 U.S.C. 101.

4.   Claims 1-6, 8, 9, 11-13, 15-24, 29, 30, 32-36, 38, 39, 41, 43, 44 and 46 are rejected under

35 U.S.C. 102(b) as being anticipated by Agarwal et al. (US Patent 6,351,742).

5.   Claims 7, 10, 14, 25-28, 37, 42 and 47 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Agarwal et al. (US Patent 6,351,742), in view of Geppert et al. (US Patent

6,463,429).

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

7.   **Claims 1-47 are rejected under 35 U.S.C. 101** because the claimed invention is directed

to non-statutory subject matter.

8.   The basis of this rejection is set forth in a test of whether the invention is categorized as a

process, machine, manufacture or composition of matter and if the invention produces a useful,

concrete and tangible result. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural

phenomena) are found to be non-statutory subject matter. For a method claim to pass muster, the

recited process must produce a useful, concrete and tangible result.

9.   In the present case, **claims 1-15** recite an apparatus, which sufficiently has physical components and structure however, as claimed, it is not clear what useful, concrete an tangible result is produced by the apparatus. The apparatus of claims 1-15 simply define a range constraint, however it is not clear how it is utilized.

10.   **Claims 16-28** recite a method where there is no useful, concrete and tangible result. The result of the method recited in claims 16-20 is either a range constraint or a set of conditions for the range constraint to follow. It is not clear how this result is useful or tangible, while it arguably may be perceived as concrete. As such, it does not meet the requirement of producing a useful, concrete and tangible results because all three factors are not satisfied.

11.   **Claims 29-47** recite a program product comprising a "computer-readable signal bearing media..." Additionally, a dependent claim in each respective claim tree further defines the computer-readable signal bearing media as transmission media. Signals are not statutory because they can not be categorized in any of the statutory categories of invention. Claims 29-47 recite a program product where a software component (database manager) is placed on a computer-readable signal bearing media. As such, the program product is embodied by potentially a signal, and therefore can not be categorized in a statutory category of invention. Furthermore, the program product seems to be also comprised of software, which is required to produce a useful, concrete and tangible result as explained above, otherwise it is merely functional descriptive material. For these reasons, claims 1-47 are nonstatutory. Because claims 31, 40 and 45 recite a limitation that is completely nonstatutory and unpatentable, they will not be addressed in the prior art rejections below.

To expedite a complete examination of the instant application, the claims rejected under

35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of

applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

13.   **Claims 1-6, 8, 9, 11-13, 15-24, 29, 30, 32-36, 38, 39, 41, 43, 44 and 46 are rejected**

under 35 U.S.C. 102(b) as being anticipated by Agarwal et al. (US Patent 6,351,742)

hereinafter "Agarwal".

14.   In regards to **claim 1**, Agarwal discloses an apparatus comprising:

     a.   at least one processor (col. 8, line 27);

     b.   a memory coupled to the at least one processor (col. 8, lines 29-30);

     c.   a database residing in the memory (Col. 8, lines 38-40); and

     d.   a range constraint defined for the database, the range constraint including at least

one limit that is dynamically determined from data in the database (Col. 5, lines 9-19).

15.   In regards to **claim 2**, Agarwal discloses the apparatus of claim 1 wherein the database

comprises at least one database table comprising at least one column, and wherein the range

constraint is defined for a selected column (Col. 5, lines 9-11).

16.   In regards to **claim 4**, Agarwal discloses the apparatus of claim 2 wherein the at least one

limit is dynamically determined from data in a column that is different than the selected column

(Col. 5, lines 9-19)[1].

17.   In regards to **claims 3 and 5**, Agarwal discloses the apparatus of claim 2 wherein the at

least one limit is dynamically determined from data in the selected column, wherein the at least

one limit is dynamically determined by performing statistical analysis on data in the database

(Col. 5, lines 9-19; col. 6, lines 11-17).

18.   In regards to **claim 6**, Agarwal discloses the apparatus of claim 1 further comprising a

database manager residing in the memory and executed by the at least one processor, wherein the

range constraint defines a range that includes the at least one limit, and wherein the database

manager allows entry of data into the database only when the data lies within the defined range

(Col. 5, lines 3-5).

19.   **Claim 8** is substantially similar to the combination of claims 1 and 2 and is rejected for

the same reasons.

20.   **Claim 9** is substantially similar to claim 6 and is rejected for the same reasons.

21.   In regards to **claim 11**, Agarwal discloses the apparatus of claim 8 wherein the at least

one limit is dynamically determined by performing statistical analysis on data in the selected

column (Col. 5, lines 9-19; col. 6, lines 11-17).

22.   **Claim 12** is substantially similar to the combination of claims 1, 2 and 4 and is rejected

for the same reasons.

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[1] The selected column is interpreted as Table1.col and the column that is different than the selected column is
interpreted as Table2.col.age. Agarwal discloses that the value of Table2.col.age is used to determine a range
constraint.

23.   **Claim 13** is substantially similar to claim 6 and is rejected for the same reasons.

24.   **Claim 15** is substantially similar to claim 5, except that the statistical analysis is performed on data in the different column. Agarwal discloses that a statistical analysis is performed on data in a different column (Table2.col.age) (Col. 5, lines 9-19).

25.   **Claims 16-20** are substantially similar to claims 1-5 in the form of a method and are rejected for the same reasons.

26.   **Claim 21** is substantially similar to the combination of claims 1 and 6 in the form of a method and is rejected for the same reasons.

27.   **Claims 22-24** are substantially similar to claims 2, 4 and 5 respectively, in the form of a method and are rejected for the same reasons.

28.   **Claim 29** is substantially similar to claim 1 in the form of a program product and is rejected for the same reasons. In regards to the computer readable signal-bearing media, Agarwal discloses a storage device (Col. 8, lines 38-40).

29.   In regards to **claims 30, 39 and 44**, Agarwal discloses the program product of claim 29 wherein the computer-readable signal bearing media comprises recordable media (Col. 8, lines 38-40).

30.   **Claims 32-36** are substantially similar to claims 2-6 respectively in the form of a program product and are rejected for the same reasons.

31.   **Claims 38 and 41** are substantially similar to claims 8 and 6 respectively in the form of a program product and are rejected for the same reasons. In regards to the computer readable signal-bearing media recited in claim 38, Agarwal discloses a storage device (Col. 8, lines 38-40).

32.   **Claim 43** is substantially similar to a combination of claims 1, 2 and 4 in the form of a

program product and is rejected for the same reasons. In regards to the computer readable

signal-bearing media, Agarwal discloses a storage device (Col. 8, lines 38-40).

33.   **Claim 46** is substantially similar to claim 6 in the form of a program product and is

rejected for the same reasons.

Claim Rejections - 35 USC § 103

34.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

35.   Claims 7, 10, 14, 25-28, 37, 42 and 47 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Agarwal et al. (US Patent 6,351,742) hereinafter "Agarwal", in view of

Geppert et al. (US Patent 6,463,429) hereinafter "Geppert".

36.   In regards to **claim 7**, Agarwal discloses a database manager residing in the memory and

executed by the at least one processor, wherein the range constraint defines a range that includes

the at least one limit (Agarwal: Col. 5, lines 3-5), and wherein:

    a.   if the data lies within the defined range, the database manager allows entry of the

        data into the database (Agarwal: Col. 5, lines 3-5).

37.   Agarwal does not expressly disclose if the data lies out side of the defined range, the

database manager allows entry of the data into the database and provides a warning message.

38.   Geppert discloses a system and method for consistency constraint management (Geppert:

Col. 4, lines 47-61). Geppert further discloses a corrective action when data is outside the range

constraint wherein a corrective action is set to be an alert sent to a responsible party (warning),

even though the query result is returned to the user (allows entry of the data into the database)

(Geppert: col. 5, lines 15-20).

39.   Agarwal and Geppert are analogous art because they are from the same field of endeavor

of database range constraints.

40.   At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the apparatus of Agarwal by modifying the database manager to have the

feature of allowing entry of the data into the database, even if the data lies out side of the defined

range and providing a warning message, as taught by Geppert.

41.   The motivation for doing so would have been because there are times when a data lies

outside the range, however, the data may still be valid. In those cases, it would be better to

notify an administrator to determine whether the data is incorrect or whether the data is correct

even though it is outside the range constraint instead of restricting the data completely (Geppert:

col. 2, lines 42-54).

42.   **Claim 10** is substantially similar to claim 7 and is rejected for the same reasons.

43.   **Claim 14** is substantially similar to claim 7 and is rejected for the same reasons.

44.   In regards to **claim 25**, Agarwal discloses the computer-implemented method for limiting

data entry into a selected column in a database table, the method comprising the steps of:

    a.   defining a range constraint for the selected column, the range constraint defining a

range that includes at least one limit that is dynamically determining from data in the

database table (Col. 5, lines 9-19; col. 6, lines 11-17).

45.   Agarwal does not expressly disclose if the data to be entered lies outside of the defined

range, allowing entry of data into the selected column, and in response thereto, providing a

warning message.

46.   Geppert discloses a system and method for consistency constraint management (Geppert:

Col. 4, lines 47-61). Geppert further discloses a corrective action when data is outside the range

constraint wherein a corrective action is set to be an alert sent to a responsible party (warning),

even though the query result is returned to the user (allows entry of the data into the database)

(Geppert: col. 5, lines 15-20).

47.   Agarwal and Geppert are analogous art because they are from the same field of endeavor

of database range constraints.

48.   At the time of the invention, it would have been obvious to one of ordinary skill in the art

to modify the method of Agarwal by adding the condition of if the data to be entered lies outside

of the defined range, allowing entry of data into the selected column, and in response thereto,

providing a warning message, as taught by Geppert.

49.   The motivation for doing so would have been because there are times when a data lies

outside the range, however, the data may still be valid. In those cases, it would be better to

notify an administrator to determine whether the data is incorrect or whether the data is correct

even though it is outside the range constraint instead of restricting the data completely (Geppert:

col. 2, lines 42-54).

50.   In regards to **claim 26**, Agarwal discloses wherein step (A) defines at least one limit that is dynamically determined from data in the selected column (Col. 5, lines 9-19; col. 6, lines 11-17).

51.   In regards to **claim 27**, Agarwal discloses wherein step (A) defines at least one limit that is dynamically determine from data in a column that is different than the selected column(Col. 5, lines 9-19).

52.   In regards to **claim 28**, Agarwal discloses wherein step (A) defines at least one limit that is dynamically determined by performing statistical analysis on data in the database table (Col. 5, lines 9-19; col. 6, lines 11-17).

53.   **Claim 37** is substantially similar to claim 7 in the form of a program product and is rejected for the same reasons.

54.   **Claim 42** is substantially similar to claim 7 in the form of a program product and is rejected for the same reasons.

55.   **Claim 47** is substantially similar to claim 7 in the form of a program product and is rejected for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Le whose telephone number is 571-272-7970. The examiner can normally be reached on Mon-Thurs : 9:30am-6pm, Fri: 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Le
Art Unit 2163
November 16, 2006

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